

Remarks/Arguments

These amendments and remarks are submitted in response to the Office Action of June 9, 2006, a response to which is due to be filed by September 9, 2006. In the Applicants' respectful submission, no fees are due in connection with the filing of this response. If the Applicants' are mistaken, the Commissioner is hereby authorized in this and subsequent replies to deduct any fees and credit any overpayments to Deposit Account No. 50-0873 for any additional fees required and, in particular, extension of time fees.

Amendments to the Specification

The Applicants have amended paragraph [0060] to correct a typographical error that appeared in the publication of the present application. No new matter has been added.

Art-Based Rejections

The Examiner's Report of June 9, 2006 included a rejection of claims 1, 3, 6-9, 12, 16 and 17 under 35 U.S.C. § 102(e) as being anticipated by Tanrikulu (US Patent No. 7,020,272). The Examiner indicated that claims 2, 4, 10, 11, and 13-15 were objected to as being dependent upon a rejected base claim, but would be allowable if re-written in independent form. The Applicants have carefully considered the Examiner's rejection, but respectfully traverse the rejection based on Tanrikulu for the following reasons.

The present application describes a method and apparatus for fast DTMF detection that includes using a plurality of notch filters, each of the notch filters having a *pair* of notches at DTMF frequencies corresponding to a selected pair of DTMF frequencies that make up a DTMF tone. In other words, each notch filter is dedicated to a DTMF. Reference may be made to tables 1 and 2 of the present application which show the DTMF frequencies and their corresponding DTMF digits.

In contrast, the Tanrikulu reference teaches a signal classification apparatus. Tanrikulu teaches the separation of an input signal into sub-bands and the use of notch filters for filtering the sub-bands. In particular, with reference to Figure 6 and the accompanying description, Tanrikulu describes eight notch filters (605), each of the filters having a notch at a respective one of the DTMF frequencies.

The Examiner broadly states that Tanrikulu teaches the claimed invention, yet he fails to identify where Tanrikulu specifically teaches the each and every element recited in the Applicants' claims. Indeed, such is not possible as no where does Tanrikulu teach or suggest notch filters having a pair of notches at DTMF frequencies, each said notch filter producing a filtered signal as claimed by applicants.

The Applicants claim a method of detecting DTMF signals in a packetized linear voice signal by filtering the packetized linear voice signal through a plurality of notch filters, each of said notch filters having a pair of notches at DTMF frequencies and each of said notch filters producing a filtered signal, calculating an energy level for each of said filtered signals, evaluating one or more criteria using said calculated energy levels and, if said criteria are met, producing a DTMF indicator.

Tanrikulu fails to teach or suggest a method or apparatus of DTMF detection that includes a plurality of notch filters each having a pair of notches at DTMF frequencies as claimed in independent claims 1 and 12. Rather, Tanrikulu describes a plurality of notch filters each having a *single* notch at a DTMF frequency. Moreover, because Tanrikulu only teaches a single notch, the resulting filtered signal is consequently not the same as that claimed and thus Tanrikulu cannot teach calculating an energy level of the filtered signal as claimed. Accordingly, the Applicants respectfully submit that Tanrikulu fails to disclose an apparatus or method having all the limitations set out in independent claims 1 and 12 of the present application, and therefore Tanrikulu cannot be considered anticipatory under 35 U.S.C. § 102(e). The Applicants respectfully request that the Examiner

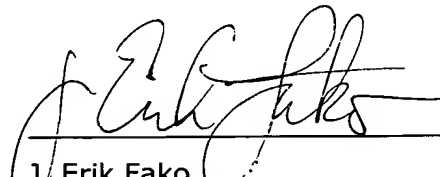
withdraw this rejection.

Furthermore, the Applicants respectfully note that Tanrikulu provides no teaching or suggestion that would motivate a person of ordinary skill in the art to modify the apparatus described by Tanrikulu to use notch filters each having a pair of notches at DTMF frequencies. Such a modification would be contrary to the explicit teachings of Tanrikulu and would render his subsequent signal analysis logic inoperable for its purpose. The purpose of Tanrikulu's invention is to classify signals. This is done by first dividing the signals into sub-bands and then filtering them to identify them. To provide two notches would provide no additional value to the invention of Tanrikulu and therefore Tanrikulu teaches away from such a modification.

In view of the foregoing amendments and remarks, the Applicants respectfully requests that the Examiner reconsider his rejections and issue a timely Notice of Allowance in connection with this application. Should the Examiner have any questions with regard to these submissions, please contact the undersigned.

Respectfully Submitted,
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